CLAIMS

1. An intermediate fluid type vaporizer comprising:

an intermediate fluid evaporation part that evaporates at least a part of a liquid intermediate fluid through heat exchange between a heat source medium and the intermediate fluid; and

a liquefied gas vaporizing part that vaporizes a low-temperature liquefied gas by condensing the intermediate fluid evaporated by the intermediate fluid evaporation part to cause a vaporized gas to flow out,

wherein

the liquefied gas vaporizing part is configured by a stack-type heat exchanger having a stacked body which is formed with first flow channel layers each having first flow channels that are channels for flow of the intermediate fluid and second flow channel layers each having second flow channels that are channels for flow of the low-temperature liquefied gas, the stacked body having a configuration in which the first flow channel layers and the second flow channel layers being stacked, and

the stack-type heat exchanger is installed in a posture where the first flow channels extend in an up-and-down direction or in a direction tilted relative to the up-and-down direction so that the intermediate fluid flows down in the first flow channels due to gravity.

2. The intermediate fluid type vaporizer according to claim 1, wherein the liquefied gas vaporizing part is provided with a liquid reservoir that stores the liquid intermediate fluid on a downstream side of the first flow channels.

3. The intermediate fluid type vaporizer according to claim 2, further comprising a liquid sealing tube that connects between the liquid reservoir and a liquid level of the liquid intermediate fluid stored in the intermediate fluid evaporation part, wherein the intermediate fluid evaporation part is positioned below the liquefied gas vaporizing part.

4. The intermediate fluid type vaporizer according to any one of claims 1 to 3, wherein

the intermediate fluid evaporation part has a shell that stores the intermediate fluid, and

the liquefied gas vaporizing part is disposed within the shell of the intermediate fluid evaporation part.

5. The intermediate fluid type vaporizer according to claim 1 or 2, further comprising a circulation pipe that connects between the intermediate fluid evaporation part and the liquefied gas vaporizing part, wherein

the intermediate fluid evaporation part has a shell that stores the intermediate fluid,

the liquefied gas vaporizing part is disposed outside the shell of the

intermediate fluid evaporation part, and

the circulation pipe connects between the shell of the intermediate fluid evaporation part and the liquefied gas vaporizing part.

6. The intermediate fluid type vaporizer according to claim 1, wherein the stack-type heat exchanger is a microchannel heat exchanger.